Army Space @ Schriever IV

By George Luker

After all was said and done, it was clear to those who participated in *Schriever IV* that this premier Space wargame continues to be an important venue for learning just how Space effects — and especially disrupted or degraded Space effects — influence Joint, coalition, intelligence, interagency and commercial operations. The *Schriever IV* Space wargame not only helped Joint wargame participants grapple with Space and high-altitude concepts and capabilities, it helped the U.S. Army Space and Missile Defense Command arrive at important findings that will benefit Army and Army Space warfighters in the future.

George "Luke" Luker is currently a military analyst who served 25 years in the U.S. Air Force (B-52s, T43s, and Joint/Combined Air and Space Operations). When he retired in 2004, he first supported U.S. Army Space and Missile Defense Command/Army Forces Strategic Command's Global Missile Defense mission; since 2005 he has supported the Space and Missile Defense Battle Lab's efforts in Army Title X and Joint wargame planning and execution.

Army team members provided significant feedback on game execution, highlighting gaps and seams in Joint Space processes, Combatant Command actions and reactions and overall command decisions involving Space.

Background: The *Schriever*-series wargame began in 2001 and has been held biennially through 2007, with the *Schriever IV* wargame serving as the capstone event for the 2006-2007 wargame cycle. *Schriever IV* planning and execution was headed by a team from Air Force Space Command's Space Innovation and Development Center. To prepare and shape the main Space wargame event, the center held a series of conferences, seminars and workshops that served as planning events for stakeholders and previews for this year's wargame concepts, scenarios and objectives. Four major seminars were offered and served as the major focus areas for the wargame: Policy & Rules of Engagement, Counterspace, Information Operations and Homeland Defense. Findings generated from these seminars were used to influence the main Space game's scenarios, scenario injects and operational environments on a global scale. The seminars and workshops also produced analysis materials which game developers, game controllers and analysts used to validate wargame execution. The capstone wargame was conducted at Nellis Air Force Base, Nev., from March 24-30, 2007, and included over 440 participants assembled from numerous organizations: Air Force Space Command, U.S. Army Space and Missile Defense Command, U.S. Northern Command, U.S. Strategic Command, U.S. Joint Forces Command, and U.S. Special Operations Command. Various other Department of Defense officials, non-Department of Defense agency representatives, and allies from the United Kingdom, Canada and Australia also took part. The global epoch for the Space wargame scenario was set in the year 2025. The main event was conducted in an environment classified as Secret.

Objective 1

Assess Army Space players' contributions to crisis action planning.

- Explore Space planning issues with U.S. Strategic Command in the development of suitable theater Space support concepts.
- Examine placement of FA40's and their required skill sets for theater level assignments.
- Help clarify and codify the Director Space Forces concept in the rewrite of JP 3-14.
- Continue to selectively identify experienced personnel to participate in Schriever wargames.
- Include the Army G-2 and G-6 communities to solicit their active participation in future Space Wargames and experimentation.

Objective 2

Examine platform/payload employment, warfighter roles and responsibilities, and command control of HALE platforms in an integrated framework of layered ISR, networked C2, and strike capabilities, paying special attention to homeland defense.

- Develop High Altitude Long Endurance command and control (C2) and tasking, processing, exploiting, and disseminating (TPED)11
- Further develop High Altitude Long Endurance operational concepts, lighter than air (Global Observer) and heavier than air (airships).
- Continue to integrate High Altitude Long Endurance into wargames and initiate a relationship with Air Combat Command as they assume High Altitude Long Endurance proponency role for the Air Force.

Objective 3

Assess how Army Space players and forces leverage and integrate Space assets to detect, deter and destroy threats.

- Advocate and support Army Space Links-and-Nodes Gap Analysis to determine the effects degraded or lost Space capabilities have on the success of Army forces in executing full-spectrum operations.
- Assess graceful degradation strategies during wargames.
- Advocate and support an operational risk assessment focusing on efforts of lost Space capabilities; participate in ongoing protection studies (e.g., a Johns Hopkins University Study) to leverage insights in developing an Army mitigation strategy.
- Examine and, as necessary, implement training for FA40s in the area of collection management processes.
- Provide more robust training of the Army Space/High Altitude Toolkit and order of battle before wargame execution.
- Develop specific Information Operations and Space Vignettes for table top examination and champion Information Operations integration into future wargames and experiments.

Objective 4

Assess how Land Component operational Space control requirements are integrated into the Joint Space Control decision-making and tasking processes.

- Coordinate with Schriever V wargame planners to shape a black-white (Special Access Program/Special Access Required) integration construct to ensure improvements to Joint Space Control processes.

ARMY PARTICIPATION: Army Space wargame support came primarily from the Future Warfare Center and the Space and Missile Defense Battle Lab. The planning phase encompassed over a year-and-a-half effort by the Battle Lab's Frontiers Division, the office of primary responsibility since Army Space and missile defense wargaming falls under their command charter. During that time, they worked closely with Air Force Space Command's Space Innovation and Development Center to help form wargame concepts, scenarios, objectives and capabilities along the way.

One of the critical elements of integrating Army and Army Space into *Schriever IV* was ensuring the wargame was staffed by uniquely experienced Army participants. Each Army participant was chosen carefully for their past operational experience, current assignment, and their level of Space and technical expertise. The primary means of ensuring the best qualified participants were included was by extending as many invitations as possible to FA40 Army Space Operations Officers and other qualified Army officers with Space expertise. Table 1 identifies the participants' organizations and player positions; Army management and support personnel are also listed.

It should come as no surprise that the Army did exceptionally well at *Schriever IV*. Army personnel not only attended *Schriever IV* in strength, they advocated effectively for Army Space and high altitude equities, requirements and capabilities in Joint operational environments. The Army took the part to promote Army Space concepts and the utility of Army Space forces. They sought out ideas during the wargame that could lead to Doctrine Organization, Training, Materiel, Leadership and Education, Personnel and Facilities solutions. At the same time, Army participants had the opportunity to make the Air Force and the Space community aware of Army Space requirements.

In the area of capabilities the Army team well-represented and advocated for future Army Space and high altitude resources, especially the High-Altitude Long-Endurance airship, a lighter-than-air asset, and the Global Observer, a heavier-than-air asset. The Army contingent introduced and highlighted these systems during the main wargame event as part of delivering Intelligence Surveillance and Reconnaissance, Communications, Targeting and Strike capabilities to the warfighter. Army members also participated in *Schriever IV* to update their knowledge of the Air Force's roles, missions, and strategies in executing the Department of Defense Executive Agent responsibilities for Space.

Moreover, the Army team exploited *Schriever IV* to examine and refine the Army Theater Support Concept, the Army Space Master Plan, and the Army Space Operations Concept Capability Plan. The Army emphasized a realistic operations tempo to ensure identification of seams and gaps in Space capabilities, command-and-control, and requirements. As a result, Army team members successfully examined theater Space support concepts, identified requirements for examining future Space command and control procedures, and appraised emerging concepts such as operationally responsive Space in Joint operational environment

PARTICIPANTS OF SCHRIEVER IV:

- MAJ Sam Russ
- LTC Andrew Weate
- LTC Victoria Miralda
- Scott Chappell GS13
- COL Doug Gneiser, Space Law
- COL Robert Bruce
- COL Scott Netherland
- MAJ Donald Johnson
- Steve Lord (Contractor)
- Dr. Cindi Schmitt (Contractor)
- Ken Kriner (Contractor)
- BG (Ret) Steve Ferrell

WARGAME MANAGEMENT AND SUPPORT

- Frontiers Division Chief, LTC Saundra Yanna
- Frank Cox GS14
- MAJ Stephen Harms
- Space Analyst, George Luker (Contractor)

Initial Observations: Throughout the event, the Army wargame team internally documented observations and comments made by Army Space players. After preparing a "quick look" assessment during the game, the following chief observations were presented to LTG Kevin Campbell just prior to his attending the Senior Leader Forum held on the final day.

- High-Altitude Long-Endurance capabilities have the potential to provide persistent critical Space-like capabilities for Combatant Commands. These assets were heavily employed in game for persistent communications and intelligence, surveillance and reconnaissance.

- An Army strategy is needed to protect Army access to Space services in a stressed environment.

- Combatant Commands need better visibility and understanding of supporting Space Architecture.

- Space command and control processes in 2025 should leverage net-centric capabilities that enable timely integration of Space effects.

- A strategic end-state should be defined to drive decision-making processes before Space warfare is initiated.

- Army strategic vision is needed to more effectively employ Army Space Professionals within the Joint Force.

- Joint Functional Component Command-to-Joint Functional Component Command integration and synchronization are paramount to delivering global strategic services to the Combatant Commands.

- Army needs to develop a strategic vision to more effectively employ Army Space Professionals within the Joint Force (military & civilian).

- Restrictive Rules of Engagement, Policies, and "today think" retarded decision-making processes during the wargame, thereby causing missed opportunities for discovery.

These quick-look observations led the way for more rigorous, systematic analyses by the Space and Missile Defense Battle Lab, which produced more concrete findings, most of which follow this section.

Objective 5

Document interactions of Army Space Forces with Joint, Coalition, and Interagency partners in planning, integration, coordination, and execution of Space control missions to defend the homeland and global theaters.

- Advocate and support an Army Space Links-and-Nodes Gap Analysis to determine the effects degraded or lost Space capabilities have on the successes of Army forces in executing full spectrum operations.
- Using the results of the Army Space Links-and-Nodes Gap Analysis, advocate for Army prioritization of information requirements and integration strategies with U.S. Strategic Command.
- Advocate for Army Space information requirements for support to land components in the areas of tactical, operational, and strategic communications, Precision, Navigation, and Timing, intelligence, and reachback to sanctuary, be included in rewrite of JP 3-14.
- Assess Space asset prioritization during wargames.
- Identify Army commercial asset data requirements and the mission utility. Inform Army decisonmakers of findings to ensure they advocate for those requirements in the proper forums.
- Advocate and support in Army Space Links-and-Nodes Gap Analysis to include a risk assessment of Joint Blue Force Situation Awareness data disseminated from all available Space systems.
- Include coalition partners in Army doctrine development and planning
- Integrate coalition partners' capabilities into Army Space future concept work.

Final Recommendations: Army team members provided significant feedback on game execution, highlighting gaps and seams in Joint Space processes, Combatant Command actions and reactions and overall command decisions involving Space. Analysts kept records of their Army participants' oral and written comments and compiled them into a final report on Schriever IV. The table on the previous pages, broken down by Army objectives for the game, and taken directly from the Schriever IV Final Report, provide recommendations for U.S. Army Space and Missile Defense Command and Future Warfare Center to consider and act upon.

Outstanding Performers: Out of the twelve main Army members who took part in *Schriever IV*, three of them were selected as "Outstanding Performers," all chosen by the individual game cells in which they participated. LTC Victoria Miralda, currently serving as the 1st Space Brigade Executive Officer, was commended for her superb support of the Joint Space Operations Center cell; LTC Sam Russ, assigned to the U.S. Navy's Space and Naval Warfare Systems Command, was tapped for his exceptional contributions to the U.S. Northern Command cell; and Steve Lord, supporting the Space and Missile Defense Battle Lab's Experiments and Transformation Division, was recognized for his consummate expertise within the Industry cell. Overall, only twelve outstanding performers were chosen for the wargame, which highlights the Army team's key contributions to the event.

Objective 6

Document ROE and policy issues that arise during Schriever IV.

- Examine High-Altitude Long Endurance in Department of Defense and interagency games emphasizing homeland defense to further assess legal issues.
- Incorporate resolution of legal aspects of High-Altitude Long Endurance into operational concepts.

Objective 7

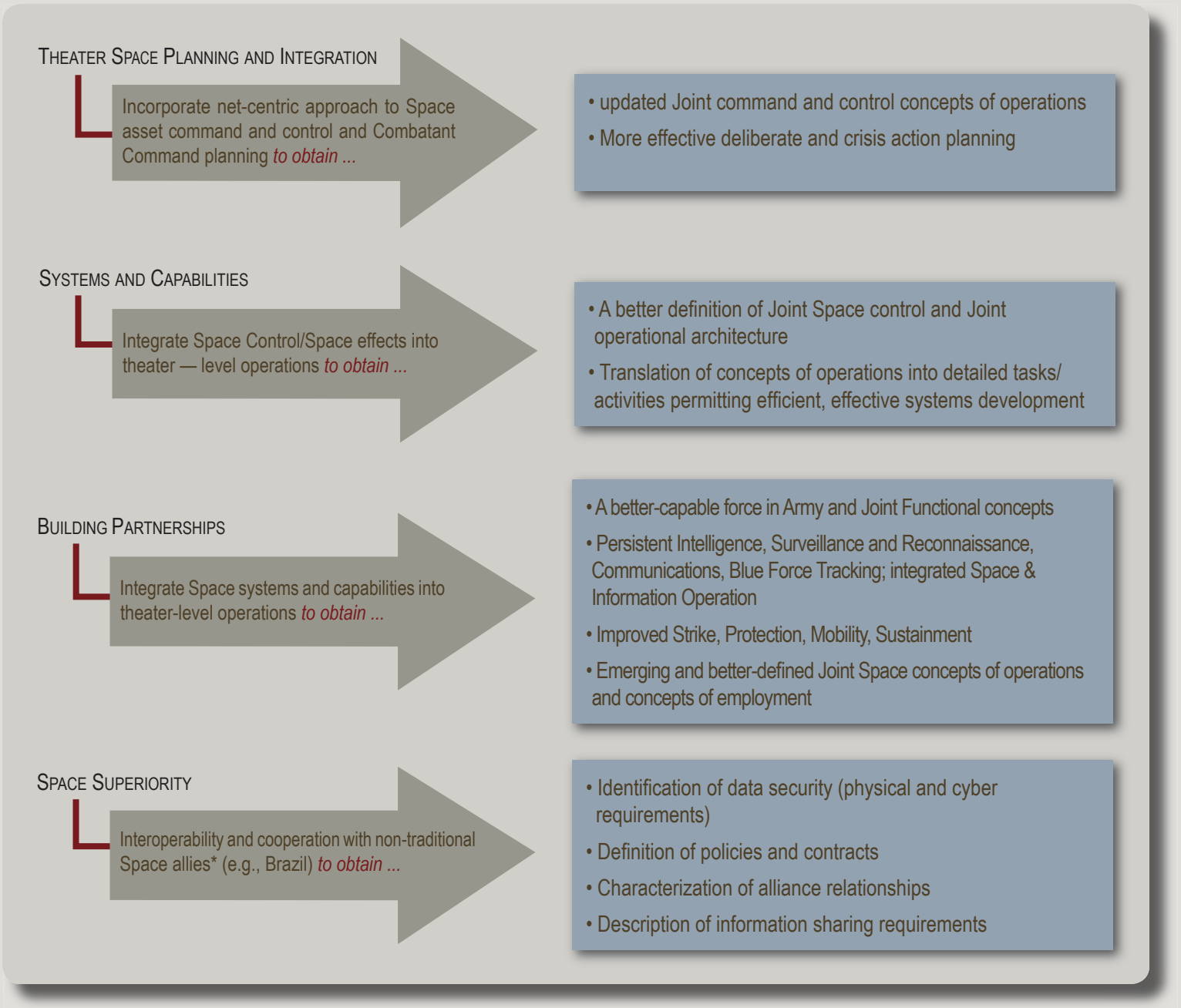
Begin assessing future Army Space Power technologies that bring capabilities to Army and Joint warfighters.

- Advocate for Space officer information requirements to be included in a User Defined Operating Picture/Single Integrated Space Architecture Picture concept.
- Generate Army requirements of inclusion in the User Defined Operating Picture/Single Integrated Space Architecture Picture.
- (SMD Battle Lab) Pursue experiments and analysis opportunities to assess User Defined Operating Picture/Single Integrated Space Architecture Picture operational and tactical relevance.

The Road Ahead: Schriever V & Unified Quest: The *Schriever IV* wargame was valuable for identifying and assessing Space operations' command-and-control seams and underscoring the numerous challenges for Joint, coalition, industry, intelligence and interagency interoperability. U.S. Army Space ad Missile Defense Command and the Future Warfare Center will continue to stay engaged in the *Schriever* wargame series to support our focus on Joint requirements and further socialize Army equities in the Joint warfighting arena. In June of this year, Air Force Space Command's Commander, General Kevin P. Chilton, approved the next iteration of the *Schriever* series, *Schriever V*. Accordingly the Future Warfare Center and the Space and Missile Defense Battle Lab's Frontiers Division, along with other key Army Space stakeholders, will join with the Air Force Space Command/Space Innovation and Development Center *Schriever* team in October of this year to begin planning *Schriever V*.

While *Schriever IV* provided numerous insights that Army Space can take back into *Schriever V*, *Schriever IV* likewise yielded results that the Army Space wargames team can transfer to *Unified Quest*, Army's Title X wargame series, held annually and culminating at the Army War College, Carlisle Barracks, Pa. In *Unified Quest* 2008, sponsored by Army Training and Doctrine Command, U.S. Special Operations Command, and U.S. Joint Forces Command, Frontiers Division's wargames team will take a more active and holistic approach to Army Space, focusing especially on Space effects and Space operations that support operational and tactical commanders.

During this year's version of *Unified Quest*, the Army has the opportunity to examine gaps, seams, and friction points between Joint, coalition, interagency communities especially at the theater level of Space operations and operational command. Out of a trends analysis brought about by reviewing the entire *Schriever*-series of wargames — *Schrievers I-III* and reinforced by *Schriever IV* — Space and Missile Defense Battle Lab analysts and wargame team detected four major focus areas: Theater Space Planning and Integration, Space Superiority, Systems and Capabilities, and Building Partnerships. From these focus areas, analysts and the Battle Lab wargames team assigned the operational contexts under which these focus areas would operate, then developed constructive objectives for the command to pursue in the shaping of this year's *Unified Quest* wargame. Ultimately the integration of Army Space focus areas and objectives into *Unified Quest* will build



on Army Space's authority and more strongly influence the "Big-A Army," Army Training and Doctrine Command, U.S. Special Operations Command, U.S. Joint Forces Command, the other services, interagencies, and coalition partners. Figure 3 depicts in more detail how focus-area trends translated into constructive objectives for this year's *Unified Quest* — and for all Joint wargames to follow.

Figure 1: Schriever Historical Trends Translated into Army and Joint Wargame Objectives

Schriever IV has been deemed by many as an unparalleled success, and this success was due in large measure to the expertise and support of the Army participants. They did their utmost to make the preparatory seminars and the wargame event productive experiences for Army Space, the Army, the Air Force, other services, coalition partners, industry representatives, and in the end, the warfighter. The Frontiers Division of the Army Space and Missile Defense Battle Lab is truly grateful for the efforts they put forth. Without their devotion to the Army Space mission, this wargame event would not have yielded the substantive findings that ultimately will be integrated into future command concepts, wargames, experiments, doctrine and fielding.